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EDITORIAL

The Natal Museum and its journals: celebrating a century of publication, 1906–2005

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HISTORICAL OVERVIEW

The nineteenth century was an era of international rivalry in the establishment of great showpiece museums, whose size, palatial appearance, growing collections and reputation for research were sources of national pride. Such iconic museums had resources and funding enabling them to despatch collecting expeditions abroad, often taking advantage of expanding control and development of large colonial territories in the tropics. This enthusiasm for natural history and museums was brought to South Africa by successive groups of British settlers. The first museum was established in Cape Town in 1825, and later officially instituted as the *South African Museum*. Remarkably quickly, under the influence of the 1820 Settlers who became established around Algoa Bay and in the adjacent countryside, museums were formed in the communities of Grahamstown (1855), Port Elizabeth (1856) and King William's Town (1884). In colonial Natal, a museum was considered to be desirable as early as 1854, and was initiated in 1879 by some members of the literary society in the young city of Pietermaritzburg. In Durban also, a municipal museum was set up, and its first director, Mr John Quekett, was appointed in 1895. As Pietermaritzburg had the status of administrative capital of the Natal Colony, the original Natal Society museum was eventually taken over to become the nucleus of the official *Natal Government Museum* in 1903. Museums with similar official status also appeared in the Transvaal and Orange Free State Republics.

The Natal Museum's first director, Dr Ernest Warren, arrived from Britain and took up his appointment in April 1903. As a highly qualified and established zoologist, he was well suited to the post, and he announced his objective of making the new institution an educational force in the colony. His academic approach was evident in the new exhibitions when the Natal Museum was officially opened on 30 November 1904. The formality and many daunting scientific names were unfamiliar to the visitors, and a letter in the local *Natal Witness* newspaper, which appeared in the following week, protested that "…the Museum is arranged to give the seal of approval to a few narrow-minded scientific men".

Warren arrived expecting to encounter a poorly known fauna that would soon yield discoveries of new and interesting organisms. There had, however, been collectors active in the colony long before he came. Their advent became possible from 1824, when the European settlement of Port Natal (later renamed as Durban) began. Indeed, the ship *Mazeppa* which arrived at Port Natal in late May 1839, brought among its passengers three notable naturalists intending to explore and collect. They were the Frenchman Adulphe Delegorgue, the Swede Johan G. Wahlberg, and the German Ferdinand Krauss. After collecting around the port, they independently followed routes into the interior. Delegorgue arrived in Pietermaritzburg in late 1839 (he described it as "a collection of crude shanties made of wood and rushes and plastered with cow dung"), and Wahlberg and Krauss visited early in 1840. They assembled diverse collections which included not only the expected birds and mammals, but also

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ERNEST WARREN, D.Sc.(Lond.), Director.

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Fig. 1. Front covers of the *Annals*, as they changed from 1906 to 2000.

invertebrates such as molluscan shells and the more conspicuous insects. Wahlberg in particular was an enterprising collector, pinning a great variety of insects, and finding and preserving (probably in brandy) even such creatures as freshwater leeches and the first earthworm to be recorded from Natal (as *Geogenia natalensis* Kinberg, 1867). Krauss was interested in molluscs and later wrote an important work on the South African shells. The first significant zoological exploration of the new Natal colony, with its adjacent territories to the south (so-called "Kaffraria") and to the north ("Zululand"), thus can be dated from May 1839.

By the time of Warren's arrival, the larger mammals and many of the bird species were already discovered, and had scientific and often colloquial names. In 1859, J.H. Gurney listed a collection of Natal birds in the British journal *Ibis*, and by 1873 he had published ten supplementary lists. Through the activities of dedicated local naturalists in Natal, collections of some invertebrate groups such as molluscs and butterflies, had already been sent overseas and become the subjects of publications by British systematists. Inevitably, given the wide extent and ecological diversity of the region, much still remained to be discovered at the start of the 20th century. The frog fauna of Natal, for example, shows this clearly: Hewitt (1911) reporting on a collection provided by Warren, summarised early anuran records—12 genera, with 24 or 27 species (depending on the interpretation of "Kaffraria"). The latest inventory (Minter *et al.* 2004) now records 25 genera and 75 species and subspecies.

The 19th century was also a time when many new scientific serial publications were started, chiefly by learned societies, universities and museums, to publicise the research results. In South Africa such publications included the *Annals of the South African Museum* (Cape Town, since 1898); *Records of the Albany Museum* (Grahamstown, since 1903); and *Annals of the Transvaal Museum* (Pretoria, since 1908).

Shortly after Warren's arrival he began to assemble contributions for a scientific journal. The *Annals of the Natal Government Museum*, Volume 1, Part 1, was published in June 1906, in a green cover bearing the colonial coat-of-arms (Fig. 1). As a result of Natal becoming a province of the Union of South Africa in 1910, the word "Government" was later omitted from the title. Adlard & Son in Dorking, Surrey, printed the journal for many years, despite the long intervals required for transmission of text, proofs and final printed volumes by sea mail to and from Britain. Volume 1, Part 1, contained eight articles, five by Warren; the other three were contributed by British zoologists who were probably known personally to Warren. The very first paper, by C. Tate Regan, described new and little-known marine fishes. Some marine molluscs were described by E.A. Smith, and a new genus of *Gymnoplea* was named by A.W. Cooper. Warren contributed two papers on new marine hydroids he had collected on the Natal coast, an article on a parasitic *Myxosporidium* infesting a rotifer, a note on the occurrence of intertidal *Convoluta* populations on Natal beaches, and an account of the abnormal hooves of a sheep.

All articles were well illustrated, and there was a wide diversity of topics and taxa. Warren's considerable technical abilities as a microscopist and scientific artist, and his interest in evolutionary matters, set a high standard for all subsequent publications. Papers by Warren appeared in every subsequent part published during his directorship.

Volume 1, Part 2 (March 1907) contained the first ethnographic contribution, a pioneering study entitled *Language and colours among the Zulus expressed by their bead-work ornaments; and some general notes on their personal adornments and clothing*, by a German missionary, Father Franz Mayr. The first palaeontological article also appeared, by R. Broom (later famous as a palaeoanthropologist), describing two new fossil reptiles from Karoo strata in Natal. The benefit of overseas expertise was again evident, with a paper on the larvae of anopheline mosquitoes, and another on freshwater crustaceans. Volume 1, Part 3 (May 1908), featured two papers by the distinguished British zoologist, G.A. Boulenger—

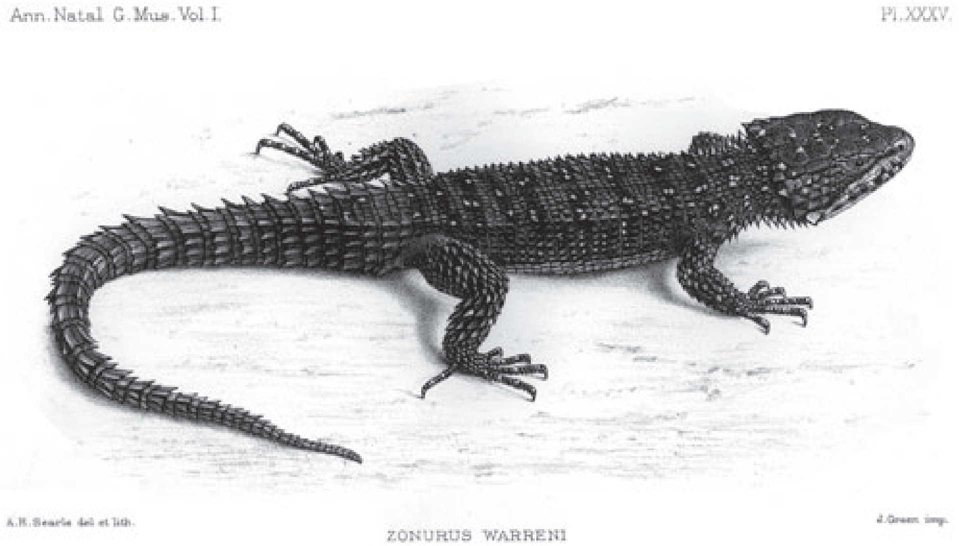
Ann. Natal G. Mus. Vol. I.
Pl. XXXV.
A.H. Searle del et lith.
J. Green imp.
ZONURUS WARRENI

Fig. 2. *Cordylus warreni* described by Boulenger (1908) from Ubombo.

one dealing with freshwater fishes, frogs and reptiles obtained from Warren, the other on the freshwater catfish *Clarias capensis*. Superb engraved plates were supplied by Boulenger (Fig. 2). A second ethnographic article by Father Frans Mayr—*A short study on Zulu music*—was welcomed by Warren, as he had expressed his concern that Zulu traditions and crafts were being corrupted by European influences, and he had soon begun to gather examples of African craftsmanship.

The establishment of a university in Pietermaritzburg was another project to which Warren contributed significantly. Concurrent with his directorship, he became the first Professor of Zoology, presenting his lectures in the Museum. This close association between institutions was expressed in the inclusion of papers by university staff in the *Annals*. The first appeared in Volume 2, Part 3 (May 1912)—*The vegetation of Natal*—by J.W. Bews, Professor of Botany and Geology. A paper on parasitic gregarine protozoans of grasshoppers, by S.F. Bush, was published in 1928 (Volume 6, Part 1); this must have gratified Warren, as Bush had been one of his students and subsequently became Professor of Zoology at the same university.

Warren retired in 1935, after 32 years as Director. It had been a career almost constantly beset by financial constraints. The annual grant-in-aid, comprising the principal source of funding for the museum, had remained virtually unchanged from its low level in 1909, and economic effects of the First World War (1914–1918) raised the cost of imported goods and services. It proved impossible to publish the *Annals* every year, so no Parts appeared in 1911, 1916, 1918, 1921, 1924, 1927, 1930 and 1935. Nevertheless, a remarkable amount had been accomplished, and the Natal Museum was known internationally through the wide distribution of its journal. Exchange agreements with other publishing institutions led to the rapid growth of the Museum library. Under Warren's editorship, seven volumes in 21 parts, comprising 3711 pages, had been published. Warren himself had contributed 50 papers.

After Warren resigned, Dr Reginald F. Lawrence was appointed Director. He came from the South African Museum, where he had become established as an arachnologist. Being an accomplished writer and a capable scientific artist, he immediately assumed editorship of the *Annals*, and edited Volumes 8 (from 1936) to 15 (1960–63) during 26 years of service. Although he retired from the directorship in 1948, he continued his research and the editorship, and was reappointed, as Senior Scientific Officer, in 1953.

Publication of the *Annals* was intermittently disrupted during World War II when communications with Britain became unreliable. Contact with museums and researchers overseas was interrupted or lost entirely; no publication of the *Annals* occurred in 1943, 1945 or 1946, but was resumed promptly in January 1947. There were noticeable changes in the diversity of zoological papers that were published in the post-war years, which in part reflected an expanding geographical scope of collecting. Brian R. Stuckenberg joined the staff in December 1953, and commenced the collection and taxonomic study of Diptera (flies); his papers and those of overseas specialists to whom he submitted material for study, began to appear in the *Annals* from 1955 and featured regularly thereafter. Collecting expeditions now often extended beyond Natal, even into adjacent countries, and the first expedition to Madagascar was undertaken in 1955–56.

The *Annals* had retained its typography, format and cover design up to Volume 15, i.e. from 1906 to 1963. In 1960, the Museum Council decided that each paper accepted for publication should constitute its own Part of a Volume, to be published by itself without delay. In all, 25 such Parts were issued and made up Volume 15 between September 1960 and November 1963. Faster publication was the motive, but it proved troublesome, and was also more costly as separate posting of each Part was required. Disliking this break with tradition, Lawrence not only gave up the editorship in 1964, but also retired finally in 1966 and moved to Grahamstown. A time for some changes had arrived.

Because of the impracticality of using an overseas printer, and growing associated costs, Adlard & Son's services were terminated. The printing was contracted to The Natal Witness (Pty) Ltd, conveniently situated next to the Museum, and Stuckenberg, at that time Senior Professional Officer, was appointed Editor with the immediate task of producing a *Festschrift* volume in honour of Dr Lawrence. With contributions from various arachnologists, mostly overseas, a volume was assembled, and constituted the entire Volume 16. In the same year (1964), a major monograph was received for publication—*Amphibia of Southern Africa: a faunal study*, by J.C. Poynton—and this was assigned Volume 17. With Volume 18 (1965–67), the three-part format was reinstated, but then another important monograph—*Empididae of Southern Africa* by K.G.V. Smith of the British Museum (Natural History)—occupied the entire Volume 19 in 1969. Volumes 20 and 21 followed, each with three Parts over three years.

A change of printers came again in 1971, when The Rustica Press (Pty) Ltd of Wynberg was appointed. For the first time, the help of a professional editor thereby became available. Volume 21 appeared (1971–73), and then came two unprecedented behemoths. The three Parts of Volume 22 (1974–76) amounted to a record 983 pages, and Volume 23 (1977–79) had 889 pages. Editorship had become onerous for Stuckenberg, as he had been appointed Assistant Director for a brief period and then Director in April 1976. It was thus a relief when Dr Jason G.H. Londt joined the staff as Assistant Director, and assumed the role of Editor in 1977.

The three decades of 1970s, 1980s and 1990s stand out for their remarkable productivity. All the research departments were fully staffed or newly enlarged, many staff members had attained doctorates, and the Museum had appointed several highly qualified new graduates from distinguished overseas universities. The relatively new departments of Arachnology (established 1967) and Archaeology (1972) launched major fieldwork programmes, and the older departments such as Malacology and Entomology continued to extend their collections. The new field of Oligochaeta studies began in 1988, with the appointment of Dr J.D. Plisko who immediately initiated a vigorous programme of collecting and study of South Africa's earthworm fauna. The outcome of this active research by staff, and also by outside specialists invited to study selected parts of the collections, was evident in the large number and diversity of articles published. During the ten-year period of 1990–99, 80 papers on Diptera appeared in the *Annals*, with Volume 32 (1991) composed largely of 12 such articles. Some studies by honorary research associates dealt with exceptional subjects, such as the historically important Ashanti Gold Stool in the Museum's collection of West African artefacts, and two historic 16th century Portuguese shipwrecks identified on the coast of northern Transkei and southern Natal.

In this period, the printing industry began to transform technologically through the advent of computerisation and offset lithography. Gone were linotype and hot-lead setting of text and etched metal plates for figures. In 1989, a major change had been approved by the Museum Council, notably that the increasing numbers of archaeological and anthropological papers should be published separately in a new journal, the *Natal Museum Journal of Humanities*. The *Annals* would feature only natural sciences, and a new cover was designed for Volume 30, bearing the Museum's newly registered coat-of-arms. For reasons of cost, printing reverted to The Natal Witness (Pty) Ltd.

Throughout the 1980s the *Annals* appeared annually, usually with two Parts constituting a volume. Also during the 1990s not a single year went without publication. By 1990, in most years the single Part printed was numbered as a complete Volume. In the interim, an Assistant Editor became essential to share the burden, and Dr David Barraclough of the Entomology Department was appointed. He became Editor from 1994, when Londt was promoted to Director of the Museum. Editing of the *Humanities* journal was undertaken by Gavin Whitelaw with the help of Valerie Ward, both of the Archaeology Department. Production technology continued to develop, and from 1999 all text had to be set by computer before electronic delivery to the printer. Barraclough handled this demanding transition admirably. The logistics of preparing the volumes by computer nevertheless became so demanding that the service of an experienced compositor, Graham Elliott, was contracted.

In 2001 the journals experienced a major image change to reflect the broader authorship and readership that had been a feature of the publications for some time. The *Natal Museum Journal of Humanities* was renamed *Southern African Humanities*, and the purpose and content of the *Annals* were reviewed. After much discussion it was decided to refocus the *Annals*, and restrict its contents to studies of invertebrates. It was hence renamed *African Invertebrates*, but to affirm its link with the *Annals*, the past numbering of the volumes was continued. The journal covers were redesigned to reflect the new approach. Barraclough resigned in 2002, and Michael Taylor was appointed as the contract editor for both journals.

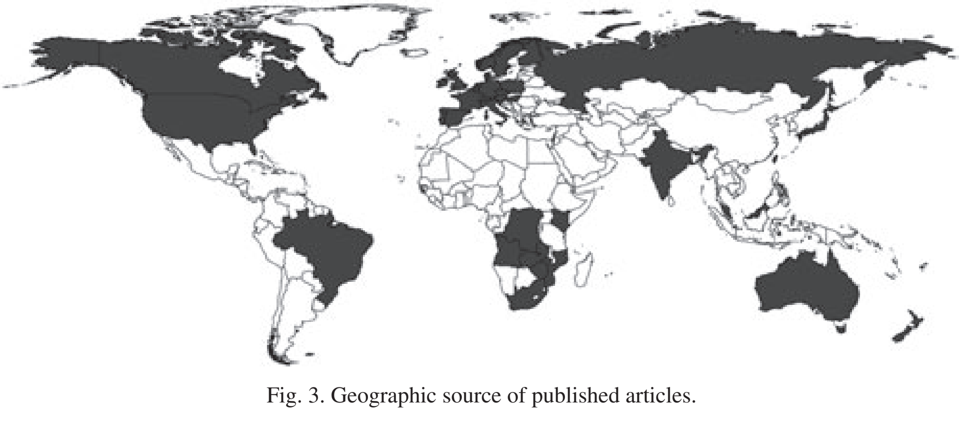

Fig. 3. Geographic source of published articles.

More internationally representative Editorial Boards were established, and more attention was directed to the extending the peer review system, to maintain high scientific standards. In this role, with its new name, the founding journal of the Natal Museum attained its centenary with Volume 46 of *African Invertebrates*, in 2005.

ACHIEVEMENTS

A convenient Index to Authors and an Index to Subjects in Volumes 1–13, prepared by Lawrence, was issued in 1957 to commemorate the first half-century of the *Annals of the Natal Museum*. It reveals that 13 volumes in 39 parts, comprising 6641 pages and 239 separate articles, had been published.

Statistics for the entire contents of the *Annals of the Natal Museum*, *African Invertebrates*, *Natal Museum Journal of Humanities* and *Southern African Humanities*, up to and including year 2005, give the following figures:

- Total number of printed pages — 24 048
    - Total number of natural science pages — 20 370
    - Total number of humanities pages — 3678
- Total number of articles — 893
    - Number of natural science articles — 768
    - Number of humanities articles — 125
- Number of all published nomenclatural acts (descriptions of new taxa, new synonymies, new names, new combinations, designations of lectotypes and neotypes, subsequent fixation of type species) — 5058
    - Number of new taxa described (species-, genera- and family-group) — 3718
      Among them, four new families were described — Rhynchoptidae Lawrence, 1956 (Arachnida, Sarcoptiformes), Athericidae Stuckenberg, 1973 (Diptera), Neurochaetidae McAlpine, 1978 (Diptera), Marginidae McAlpine, 1991 (Diptera).
- Articles were submitted from 39 countries (Fig. 3) — Angola, Australia, Austria, Belgium, Brazil, Canada, Congo, Czech Republic, Denmark, Fiji, Finland, France, Germany, Hungary, India, Ireland, Israel, Italy, Japan, Kenya, Malaysia, Mozambique, The Netherlands, New Zealand, Norway, Poland, Portugal, Réunion, Russia, Slovenia, South Africa, Spain, Sweden, Switzerland, Taiwan, United Kingdom, USA, Zambia, Zimbabwe.

A wide range of natural science topics has been covered in the *Annals of the Natal Museum* and subsequently in *African Invertebrates*. Besides taxonomy and systematics of various animal groups, papers dealing with embryology, histology, medical and agricultural entomology, terrestrial and marine ecology, botany, geography, palaeontology, general geology, with special reference to petrography and stratigraphy, and nature conservation have been published. Similarly impressive is the coverage of animal taxa, which includes representatives of Protozoa, Porifera, Cnidaria, Plathelminthes, Nematoda, Rotifera, Onychophora, Arthropoda (including Crustacea, Chelicerata, Trilobita, Myriapoda and Insecta), Annelida, Bryozoa, Mollusca, Sipunculida, Echinodermata, Hemichordata (Enteropneusta), as well as various vertebrates (fishes, amphibians, reptiles, mammals and birds).

An analysis of the publication dynamics over the period of 1906–2005 (Fig. 4) shows a steady increase in the number of printed pages and in the number of the published nomenclatural acts. Only economic recession after World War I and World War II negatively affected the production of the journal. An additional decrease during the second half of the 1990s could have been caused by difficulties associated with major construction works undertaken at the Museum. Another trend that can be inferred from this analysis concerns the ratio of nomenclatural acts other than new descriptions to the number of new descriptions

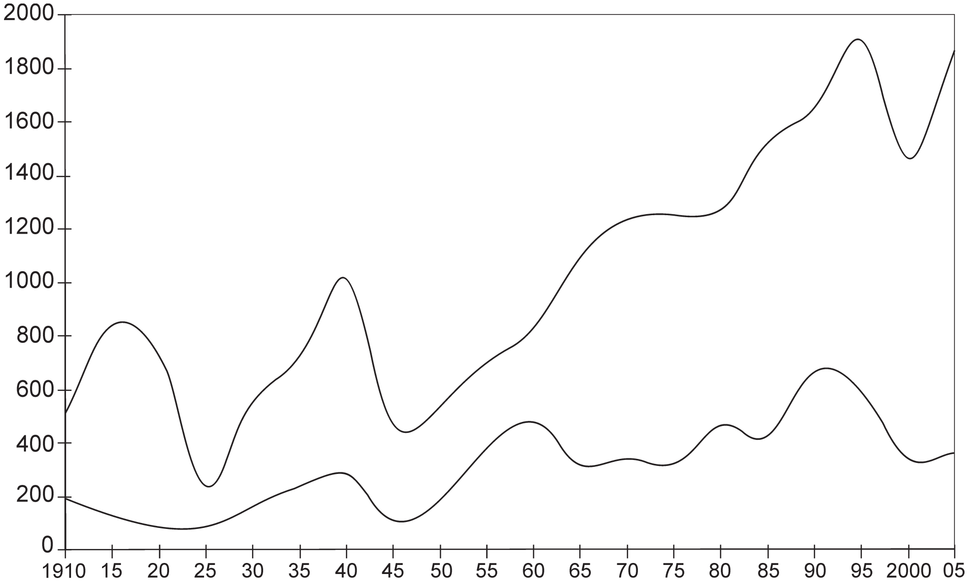

Fig. 4. Number of natural science pages (upper curve) and nomenclatural acts (lower curve) counted by 5-year clusters.

(Fig. 5). This ratio began to increase gradually after the 1960s, and reached a maximum in the 1980s and 1990s, when newly proposed synonyms, names, combinations, designations of lectotypes and neotypes, and fixations of type species outnumbered new taxa, sometimes considerably. This may indicate a shift in taxonomic practice, away from a predominantly descriptive approach towards a reassessment of previous work.

In one of his early reports, Warren stated: “The position of Director of a Museum entails the survey and investigation of the fauna of the country in which it is situated. This is especially the case in a new country like Natal”. He clearly considered it his duty to make the fauna as well known as circumstances allowed. As he well knew, it was through the assembly, study and maintenance of collections that the classification of organisms was gradually created, thereby establishing the framework for the organisation and progress of biological science.

If indeed it was a fundamental purpose of the Natal Museum to make the fauna, as well as the culture, history and prehistory of humans in eastern South Africa, known, evidence of more than 24 000 published pages can be offered as a measure of success. It is to be hoped that the fascination of collections of original objects will never be lost—that the intellectual curiosity that attracts people to things preserved in museums will continue to drive careers, and that the resulting contributions to knowledge and understanding of our world will be appreciated and rewarded.

ACKNOWLEDGEMENTS

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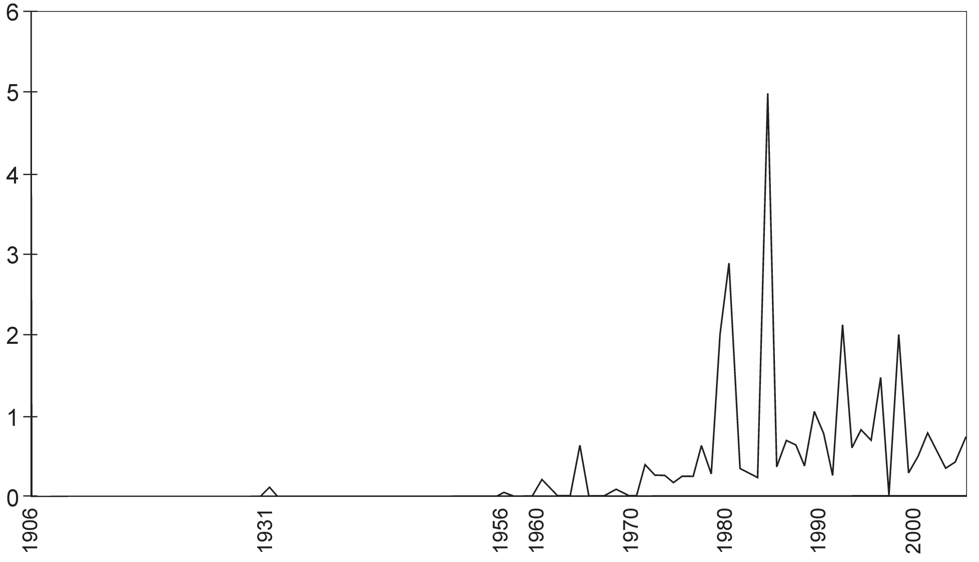

Fig. 5. Ratio of the number of nomenclatural acts other than new descriptions to the number of new descriptions.

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